I. REMARKS

The Office Action dated February 15, 2008, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1 and 3-20 are pending.

No amendments to the claims or specification are made by this Response.

Claims 1 and 3-20 were rejected under 35 U.S.C. § 103(a) over Kruecke et al. (U.S. Patent No. 6,080,799), in view of Moore et al. (U.S. Patent No. 5,658,962). Applicants traverse the rejection.

Claims 1 and 3-20 have been discussed previously in the Amendment and Response dated December 26, 2007.

Applicants submit that Kruecke et al. and Moore et al. do not teach or suggest the presently claimed invention. Applicants have discussed these cited references previously.

Before addressing the pending rejection, Applicants remark that the presently claimed invention provides for foaming agent compositions prepared by using HFC 365 mfc as a blowing agent, wherein the compositions have improved thermoinsulating properties. Applicants submit that they have found that by adding a hydrofluoroether of formula (I) having a boiling point from 50°C to 150°C to HFC 365 mfc, it is possible to reduce the thermal conductivity of polymeric foams prepared by using HFC 365 mfc as a blowing agent.

Applicants submit that this is shown in Table II of the present specification. For example, Table II compares foams which were prepared by using HFC 365 mfc as a blowing agent (Comparative Example 1) with foams prepared by using the composition HFC 365 mfc and hydrofluoroether, according to present claim 1 (Examples 2-6).

Applicants submit that the variation of thermal conductivity of said foams was controlled over a storage period of 35 days at 23°C and 50% relative moisture. Applicants submit that Table II shows that 24 hours after the start of the experiment, thermal conductivities of the foams according to the present invention (Examples 2-6) are lower than that of the foam of Comparative Example 1. Applicants submit that the same result was found at the end of the period of 35 days.

Applicants submit that Table II also shows that the difference between the thermal conductivity of the foam of Comparative Example 1 and the thermal conductivity of the foam of Examples 2-6 was at least of 0.4 mW/m.K. after one day (Comparative Example 1 versus Example 3) and at least to 0.6 mW/m.K. after 35 days (Comparative Example 1, versus Examples 3 and 6). Applicants submit that this result is completely unexpected over the cited references, since neither Kruecke et al. nor Moore et al., alone or in combination, teach or suggest that the thermoinsulating properties of foams prepared by using HFC 365 mfc as a blowing agent can be improved with the addition of one or more fluorinated compounds of formula (1).

Further, Applicants submit that the hydrofluoroethers of the presently claimed invention, when used in admixture with HFC 365 mfc to form polymeric foams, do not act as blowing agents, and therefore, they do not foam the polymer or at least do not appreciably foam the polymer. The specification notes this multiple times. For example, the specification states that by using compositions prepared by adding the following hydrofluoroethers as blowing agents (see page 19, lines 1-17):

- α, ω, di-hydro-perfluoropolyethers HGalden® (H-Galden® B), b.p. 94.4°C (Examples 2-3);

- α, ω di-hydro-perfluoropolyethers H-Galden®, (H-Galden® C), b.p. 125°C (Example 4);

- C_4F_9-O-CH_3 (HFE® 7100), b.p. 60°C (Example 6); or

- $(C_3F_7)_2$-CF-O-C_2H_5 (HFE® 7500, m.w. 414), b.p. 128°C (Example 7);

to HFC 365 mfc, significant differences in cell sizes in the polyurethane foams obtained in Examples 2-6, with respect to those of the foam of Comparative Example 1, were not found.

Therefore, Applicants submit that the hydrofluoroethers of formula (1), when admixed in the claimed quantities, are neither foaming agents nor cell size modifiers (see also specification, page 13, lines 15-19).

In addition, Applicants submit that Comparative Example 7 on page 19 of the specification describes an experiment carried out according to the foam preparation general process of Examples 2-6, except that before the foaming reaction, only H-Galden® C was added. Applicants submit that in the experiment, the liquid mixture did not produce foam.

Therefore, Applicants submit that in view of the Examples in the present specification, the obviousness rejection is untenable, because of the following:

- The hydrofluoroethers of the composition of present claim 1 do not impart an acceptable blowing effect, since the Examples show that said compounds are not cell size modifiers.

- For the same reasons, the hydrofluoroethers of the composition of present claim 1 are not able to impart a cell regulating effect. Applicants note that in the art, cell regulators are known to be surfactants (see the previous Response filed

on January 19, 2007). Applicants submit that Kruecke et al. addresses compounds having cell regulating effect (see col. 3, lines 25-26). Therefore, Applicants submit that there is no motivation in Kruecke et al. or Moore et al. to select the hydrofluoroethers more than the compounds already indicated by Kruecke et al. for use as cell regulators in foams.

Applicants also submit the following arguments to the comments asserted by the Examiner:

In response to the Examiner's assertion that the results must compare to the closest prior art, Applicants note that the results, as reported in Table II of the specification, do compare to the closest prior art.

In response to the Examiner's assertion that results must be unexpected, Applicants submit that based on the cited references, one of ordinary skill in the art would not expect that using hydrofluoroethers in combination with an amount of HFC 365 mfc as blowing agents could result in foams showing a lower thermal conductivity compared to foams obtained by using HFC 365 mfc alone.

In response to the Examiner's argument that the claims must be commensurate with showings, Applicants remark that the present claims are directed to a foaming agent composition consisting essentially of HFC 365 mfc and hydrofluoroethers of formula (I) having a boiling point of 50-150°C. Further, Applicants disagree that the presently claimed invention is a "mere optimization of the knowledge of the art," as, noted above, there is no teaching or suggestion in the cited reference on how to improve the thermoinsulating properties of polymeric foams prepared by using HFC 365 mfc as a blowing agent.

Further, in view of the fact that H-Galden® alone is not a blowing agent when the foams are prepared by adopting the conditions used to expand HFC 365 mfc, there is no reason to doubt that, in combination with HFC 365 mfc, the result would be different.

We remark that the results obtained in Examples 2-6 support this assertion. In fact, as already noted, significant differences in cell sizes in the polyurethane foams obtained in Examples 2-6, with respect to that of the foam of Comparative Example 1, were not found. Applicants submit that if the hydrofluoroethers would be instead blowing agents in the conditions used to expand HFC 365 mfc, cell sizes would be expected to be different, as the moles of blowing agents in the gas phase would be increased compared to those of HFC 365 mfc.

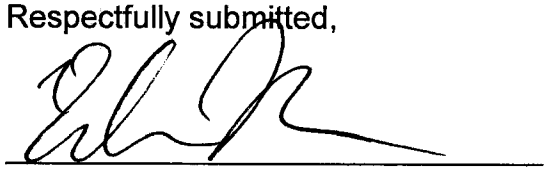
For at least the above reasons, Applicants submit that the presently claimed invention is patentable over Kruecke et al. and Moore et al. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 3-20 under 35 U.S.C. § 103(a) over Kruecke et al. and Moore et al.

II. CONCLUSION

In view of the amendments and remarks above, Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon. Should the Examiner believe anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' representatives at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees that may be required with respect to this paper or credit any overpayment to Counsel's Deposit Account 01-2300, making reference to Attorney No. **108910-00121**.

Respectfully submitted,



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